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CDD*
comparing the expression profile of said experimental sample to the expression of said reference samples to identify the reference sample that matches said experimental sample in gene expression; and

diagnosing the experimental sample with the disease of the matching reference sample.

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4. (Amended) A method to diagnose physiological disorders comprising:
comparing a gene expression profile from an experimental sample to a gene expression that represents an average of a plurality of reference samples with matching indicators of reproductive status; and
using said profile information to diagnose physiological disorders.
 5. (Amended) A method to identify the reproductive status of a sample comprising:
generating an expression profile from the experimental sample, and
comparing said expression profile to a plurality of expression profiles of known reproductive state; and
identifying said physiological status of said sample of unknown origin using said expression profile.
 6. (Amended) A method of to identify markers of different reproductive states in women comprising:
matching a sample from a first physiological state to a sample from a second physiological state;
comparing the expression profiles from said first and second physiological states;
identifying genes that are differentially expressed in said first and second reproductive states; and
using the expression profile data to identify markers of different physiological states in humans.